



Professionalism and Safety Culture

Robert Sumwalt
AsBAA Safety Summit 2020



Professionalism:
Maintaining the
right attitude

A photograph of a damaged aircraft, likely a military jet, on a runway. The aircraft is heavily damaged, with its nose and cockpit area crushed. The tail number "106038" is visible on the side. The aircraft is surrounded by debris and is positioned on a paved surface. In the background, there are trees and a clear sky. A blue text box is overlaid on the image, containing a quote in yellow text.

“the pilots’ unprofessional behavior, deviation from SOPs, and poor airmanship, which resulted in an in-flight emergency from which they were unable to recover.”

An Impressive Operation



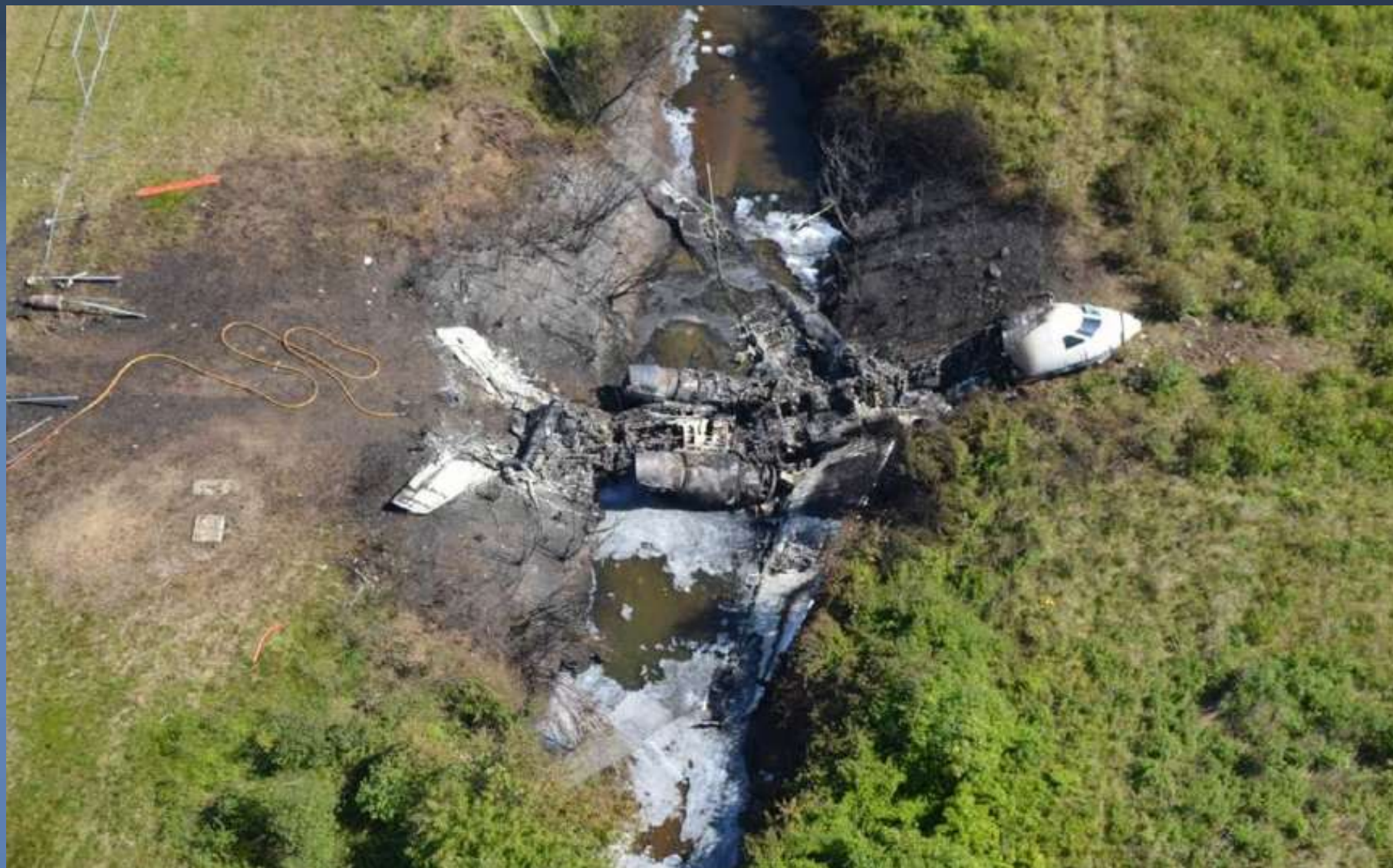
An Impressive Operation

- Full time crew
- Impeccable maintenance
- High training standards
- Going above minimum standards
- Positive audit comments

Positive Audit Comments

- “The SMS of this operator is well-developed”
- “Best practices are consistently employed in all facets of the program”
- “Continuous SMS improvement is actively pursued”
- “The Flight Ops Manual is remarkably well-written and comprehensive”
- “Safety culture within the department is shared among all team members”
- “Open reporting of hazards is consistently encouraged by management”
- “Solid safety program, maturing nicely”

Gulfstream G-IV Crash
Bedford, MA
May 31, 2014
7 Fatalities





NTSB Investigation Found

- The flight crew failed to disengage the gust lock.
- None of the five manufacturer specified-checklists were verbalized on the accident flight.
- No complete flight control check for 173 of the past 175 flights.



1000 m

1750 m

2133 m

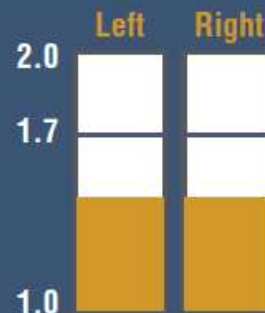
2438 m

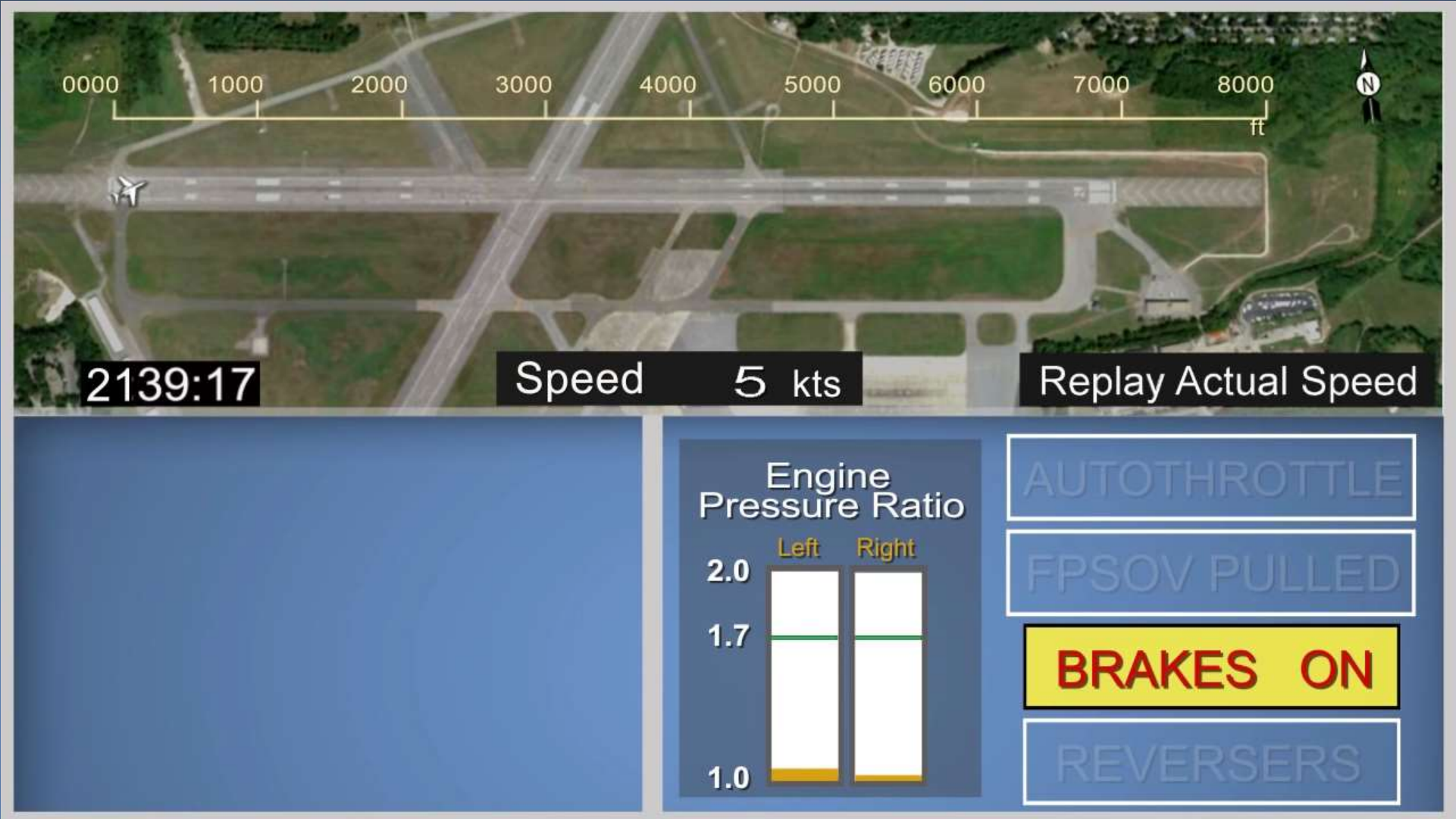


2139:59 **PIC** (steer) lock is on.
 2140:02 **PIC** (steer) lock is on.
 2140:03 **PIC** (steer) lock is on.
 2140:04 **PIC** (steer) lock is on.
 2140:06 **PIC** (steer) lock is on.
 2140:07 **PIC** (steer) lock is on.

Rwy 11-29 at BED Hanscom Field is 7001 x 150 ft plus there is another 1000 ft of paved overrun before the abrupt encounter with the raised bank of the Shawsheen River.

Engine pressure ratio (EPR)

**AUTOTHROTTLE****FPSOV PULLED****BRAKES ON****REVERSERS****NTSB**



Probable Cause

- “The flight crewmembers’ failure to perform the flight control check before takeoff, their attempt to take off with the gust lock system engaged, and their delayed execution of a rejected takeoff after they became aware that the controls were locked.”
- “Contributing to the accident were the flight crew’s habitual noncompliance with checklists...”

ALSO

- A gust lock/throttle interlock system that did not meet certification standards.

The big question:

**WHY WOULD AN EXPERIENCED
FLIGHT CREW PERFORM THIS WAY?**

Procedural Drift

- “When flight crewmembers perform a routine check repeatedly over a long period of time and never encounter an example of its effectiveness as a safety protection, they may experience a decreased perception of the check’s importance.”
- “As a result, they may begin to skip the check and reallocate their efforts toward other goals that they regard as more important.”

Procedural Drift

- “Such changes can lead to the development of new group norms about what is expected and an increasing mismatch between written guidance and actual operating practice.”
- “This increasing mismatch has been described as ‘procedural drift’.”

com·pla·cen·cy

/kəm'plāsənsē/ 

noun

a feeling of smug or uncritical satisfaction with oneself or one's achievements.

"the figures are better, but there are no grounds for complacency"

synonyms: smugness, self-satisfaction, self-congratulation, self-regard; gloating, triumph, pride; satisfaction, contentment

"the complacency he felt as a math student was abruptly shaken when he took his first calculus exam"

**IN
USE**

CVR Listening Room 1

IN USE

Brazy UPS BHM

How does it sound?

1921:44

HOT-2

you know, I think you're gonna need to just shut the # up.

1921:49

HOT-1

love to poke my head back around and say that. you know ladies and gentlemen uh, we've thought about it....

1921:55

HOT-2

[sound of laughter] it was unanimous up here.

1921:57

HOT-1

* we've come to the conclusion that you people should all shut the # up.



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DVR 1-Q12



15:07:32.8

HOT-1

much # better.

15:07:36.8

HOT-2

I thought you were gonna say why are you # up?

15:07:38.8

HOT-1

no. no. much # better.

15:07:41.5

HOT-1

you've been paying attention to what I've been doin'. you're
understanding the #.

15:07:45.6

HOT-1

you know what to # look for now.

15:07:46.7

CAM

[sound similar to decrease in engine thrust]

15:07:49.4

HOT-1

see how # ya # (it) and # incredible man. you're # doin' good
right now.



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Predicting a Future of Safety

SAFETY CULTURE

Zaleski, Ohio

January 2019

Direction of travel

“Survival Flight’s poor safety culture likely influenced the accident pilot’s decision to conduct the accident flight...”

Scattered airframe and medical interior debris

Main cabin

Engine and aft cabin

Cockpit instruments and cockpit floor

Tail boom

Tail rotor and tail boom

MR head and 3 MR blades

North

Near Santa Fe, NM

June 2009



“Contributing to the accident was an organizational culture that prioritized mission execution over aviation safety...”



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Safety Culture is:

“Safety culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.”

Source: U.S. Nuclear Regulatory Commission

Do you have a good safety culture?

Do you have a good safety culture?

- “... it is worth pointing out that if you are convinced that your organization has a good safety culture, you are almost certainly mistaken.”
- “... a safety culture is something that is striven for but rarely attained...”
- “... the process is more important than the product.”

– James Reason, “Managing the Risks of Organizational Accidents.”

“Good can be Bad”

- With good safety performance, people/organizations can easily become complacent.
- Don't ever believe that a lack of accidents means you are “safe.”
- To counter this complacency, there must be a leadership obsession with continuous improvement.

- Courtesy of Jim Schultz

A Few Tips

to Avoid This





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Negative Publicity Avoidance

“You never know on which flight your career will be judged.”



SPORTS FINAL

DETROIT STUNS 49ERS 27-24 1,10C
 LIONS WERE WINLESS
 ▶ REFS UNDER REVIEW, 1C
 ▶ NFL REPORT, 1,10,13C

ANDRUW JONES IS USA TODAY'S MINOR LEAGUE PLAYER OF THE YEAR
 By Andrew Ilioff
 ANDRUW JONES: 25
 IRs and 100 RBI, 1C

OUTFIELDER ANOTHER STAR IN ATLANTA CONSTELLATION, 1C

USA TODAY

NO. 1 IN THE USA . . . FIRST IN DAILY READERS

HOME SALES HIT HIGHEST POINT IN 15 MONTHS 1B
 EVEN IF SURGE FALTERS, ECONOMY WILL GET BOOST

NEW FILMS FEATURE WOMEN AND ISSUES THEY FACE TOGETHER
 SISTERHOOD TO OUTSHINE SHOWGIRLS, DRAG QUEENS, 1D

WINO Stars in

TUESDAY, SEPTEMBER 26, 1995

NEWSLINE

A QUICK READ ON THE NEWS

WALL STREET: Dow Jones industrial average rises 5.78 points to 4769.93; Nasdaq index falls 7.24 to 1046.15; 30-year Treasury bond yield remains at 6.58%. 1,3B.

CHILD BURIED: Stephanie Kuhen, 3, is buried; she died when the car she was in was hit by gunfire on Los Angeles dead-end street. Fourth suspect arrested. 4A.

BALANCING ACT: Clinton administration walks fine line to balance human rights commitment with pledge to make job protection heart of foreign relations. 9A.

NEW AIRLINE: British entrepreneur Sir Freddie Laker and a Texas oilman plan to launch U.S.-based trans-Atlantic airline with flights from Florida to Britain. 1B.

CHESS BATTLE: Challenger Viswanathan Anand, left, beats reigning champ Garry Kasparov in the ninth game, breaking series of draws and recording the first win in Professional Chess Association world championship in New York. 13C.



DELANY DIES: Bessie Delany, second black female dentist in New York, subject of

Your name here (?)

FIRST IN A 3-PART SERIES

WARNING: PILOT ERROR

How regional airlines failed to heed warning signals about pilots who didn't belong in the cockpit

Dead Calif mont

By Mimi Ha
 USA TODAY

Former
 dental can
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 porters are
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Such a p
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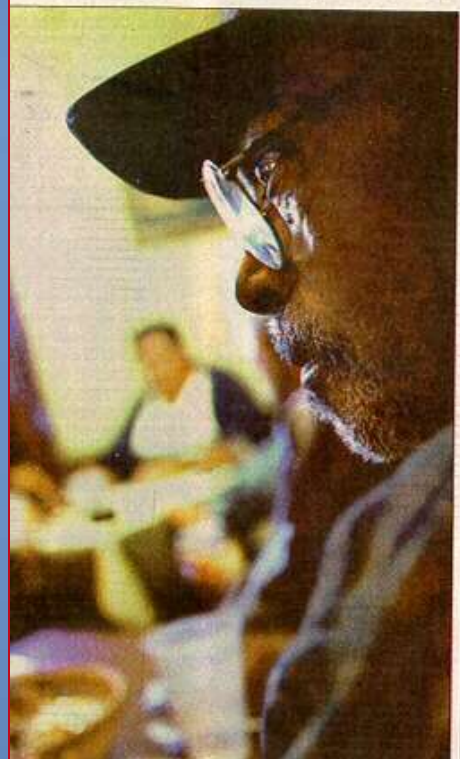
Perot, on
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 voters who
 they don't f
 Democrats

"It will ne
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 who got 19
 he ran in
 owned by (



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ETERANS



Pilots' acts might have led to crash

■ Tail section of doomed jet found on ocean floor

By ERIC MALNIC, MATT SURMAN and MITCHELL LANDSBERG
Los Angeles Times

PORT HUENEME, Calif. — Investigators are considering whether the pilots of Alaska Airlines Flight 261 unwittingly triggered their violent plunge into the Pacific Ocean by following prescribed procedures for an emergency landing, air safety officials said Thursday.

Late Thursday searchers found the tail of the jet after recovering the flight data recorder earlier in the day.

Underwater robots exploring the ocean floor found where the wreckage came to rest after the MD-83

ies, some of which are believed trapped under the debris.

National Transportation Safety Board officials raised the question about the pilots' actions after listening to a recording of the final 30 minutes that was contained in a cockpit voice recorder retrieved late Wednesday.

One NTSB official, speaking on condition of anonymity, said the investigation into the crash is increasingly focusing on the pilots' actions during their preparation for an emergency landing at Los Angeles International Airport.

In hindsight, investigators say, it appears possible that a by-the-book response to the mechanical problem reported by the pilots — a "horizontal stabilizer jam" — could have sent the plane into its wild, corkscrewing descent into the sea.





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Take the Most Conservative Approach

What to do?

Take the most conservative approach

De-ice?

Divert?

Add more fuel?



Don't de-ice

Continue?

Risk min fuel
landing?



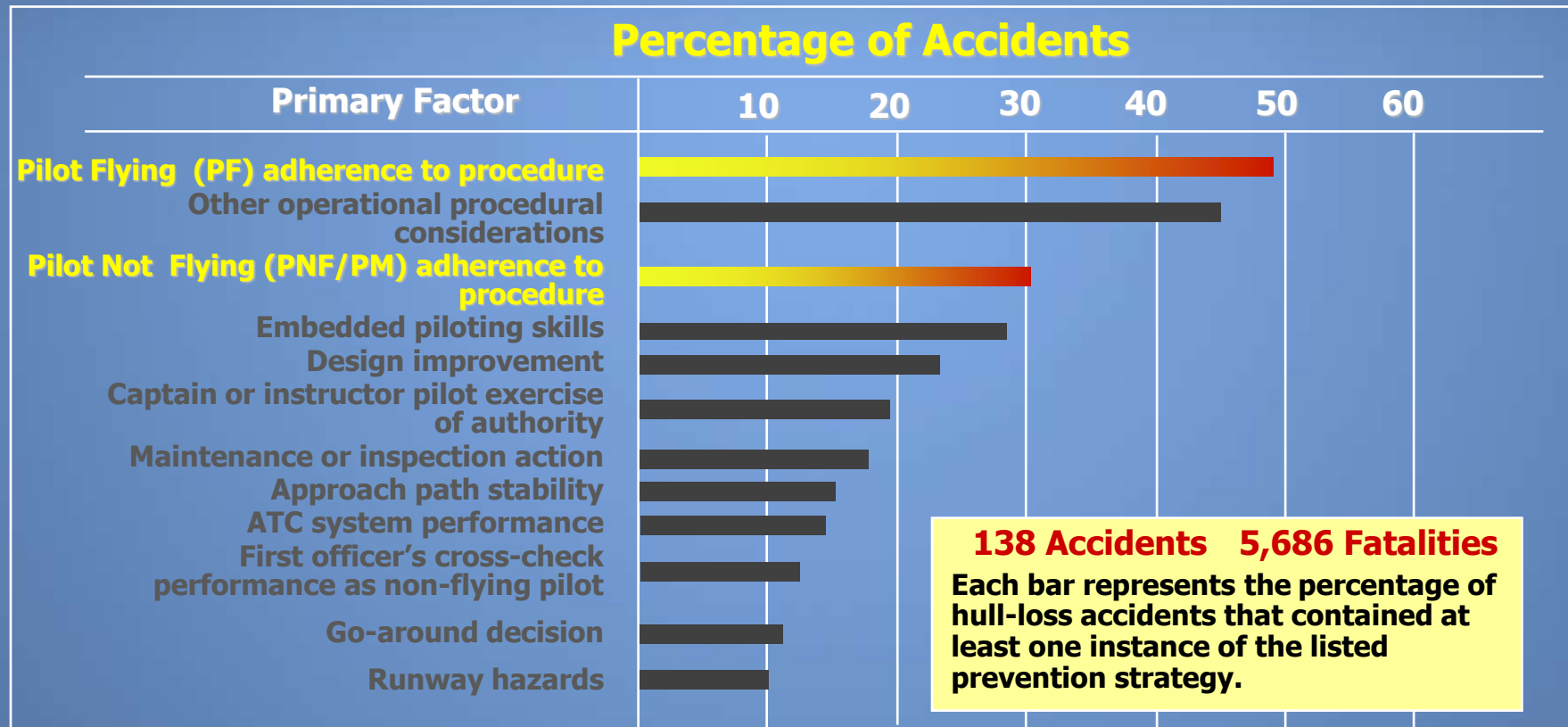
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SOP Adherence

Accident Prevention Strategies

Source: Boeing study of accident prevention strategies

Hull-loss Accidents over 10 Year Period



Intentional non-compliance leads to other problems

- LOSA data revealed that, compared to crews who followed SOPs, crewmembers who intentionally deviated from procedures:
 - averaged making 3 times more errors
 - mismanaged more errors
 - found themselves in more undesired aircraft situations



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Be Professional

What is a professional?

- A mindset
 - Precise checklist usage
 - Precise callouts
 - Precise compliance with SOPs and regulations
 - Staying abreast and current with knowledge and skills
 - The ability and willingness to say “I don’t know” or “I am wrong”

Professionalism

Doing the right things,
even when no one is watching.

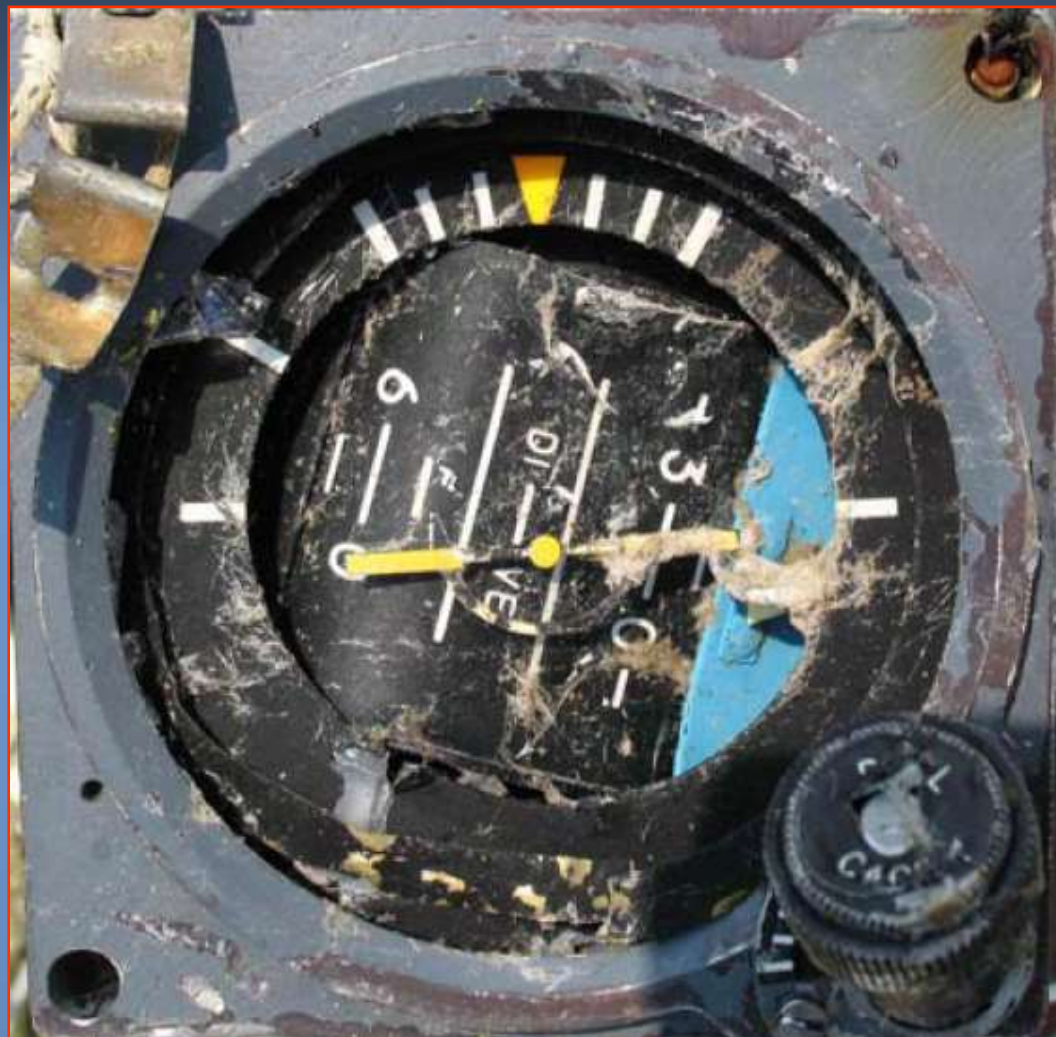


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Free Lesson

“Learn from the mistakes of others. You won’t live long enough to make them all yourself.”







National Transportation Safety Board